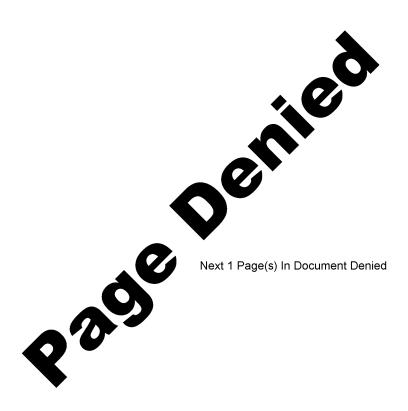
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	Amported Development of New Forge Hammers by VEB Schwarmschinenbau Heinrich Rau	NO. OF PAGES NO. OF ENGLS. SUPPLEMENT TO REPORT #		
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	THIS IS UNEVALUATED INFOR	MATION		
· 1.	ennerted in the July 1955 edition of Corner	cle on new forge hammers <u>Report</u> , a publication of the		
	Rest German Chamber of Fereign Trade at 10h	remarkrasse 61. Berlin 8. The		
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NEW FORGE HAMMERS

For precision forgings large bridge nammers with a 5-ton falling weight and welded in all major parts are made by VEB Schwermaschinenbau Heinrich Rau, Wildau (Koenigs Wusterhausen) (Fig. 1). Both columns are cylindrically rolled and electrically welded, the bridge consists of a sheet-iron housing in fully stressfree welded construction. Made of cast steel and cutting right through the bridge the two tup guides extend downward. They are fitted with cast-iron ledges and at the top firmly joined by a sturdy crosshead of east steel which contains the cast-iron working cylinder. Despite its slender shape the cylinder is very soundly constructed and easily capable of withstanding a weight of blow ranging up to 10 atmospheres pressure. Working piston and piston rods are shrunk fit, with the latter additionally safeguarded through being flanged. The other rod end holding the tup is ballshaped and, by means of wedge and guard-keys, secured to the tup thus creating a connection which is absolutely free from play.

Operation is by one-arm control lever arranged on the valve-box side approximately 960 mm. above ground. The lever-controlled operating rod for the valves consists of two parts, one of them being connected to the pressure lubricator and the other to a limit releasing device which fully eliminates any possibility of damage as might be caused by retarded braking of the reversing stroke. An additional safeguard is provided by strong conical springs fitted beneath the crosshead on either side of the piston rods. The hammer is equipped with a double-seat valve

control mechanism and the valves are regulated from above.

On account of its large weight the anvil block is composed of three separate parts, the 60-ton base, the 50-ton middle section, and the 10-ton guard plate.

Technical data:

falling weight 5 t fall 1.600 mm. number of strokes 80 per minute working pressure 6 to 10 at. forging height above ground 750 mm. bridge clearance height 2 100 mm. widht 4.000 mm. weight of hammer 40 t. weight of anvil block total weight 150 t.

The single-frame forge hammer with 750 kg. tupping weight (Fig. 2) is steam- or air-operated and has a portable anvil block thus considerably reducing the strain on the hammer structure.

It is suitable for hammer or precision forging and fitted with a combined hand and automatic control.

The frame is mounted on a cast steel base-plate which is broken through by the anvil block carrying the anvil head with lower inset. These latter are secured by dovetail guides.

Fig. 2: Single-frame Hammer with 750 kg. Tupping Weight

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Fig. 3: Mounting a 10 meter-ton, Sweging Hammer,

Exchangeable Vee-guides for tup and working cylinder are fitted to the frame. The upper cylinder cap with built-in conical spring serving as stop-block to allow gentle braking of the piston in its upward movement.

Tup and piston together with piston rod are forged integral, with the upper inset joined to the tup in normal dovetail fashion. The valve box is attached sideways to the cylinder and contains in the upper cap the slide controlling the hammer between zero and maximum blow capacity.

With automatic control the impact force is very widely variable, while individual and setting blows can be effected by an additional control lever.

Technical data:

1 400	The control of the co
tupping weight	750 kg.
cylinder diameter	320 mm.
fall	800 mm.
working pressure	8 to 13 at.
forging height abo	ove ground 720 mm.
extension to tup of	entre 710 mm.
max. height above s	shop floor 3,965 mm.
strength of base-p	late 400 mm.
weight of anvil blo	ock 15,000 kg.
total hammer weig	ght 26,000 kg.

Designed as double-action drop hammers for the handling of larger size drop stampings the firm offer their swaging hammers type G 10 to G 40 (Fig. 3). Operation is with two tups executing simultaneous

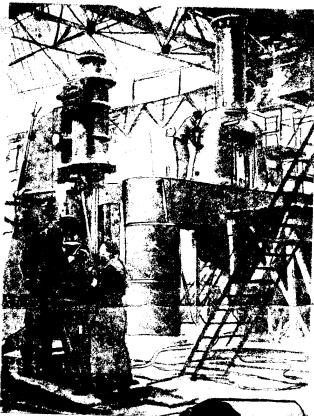


Fig. 4: Single-frame Hammer (foreground) and Bridge being mounted

counterblows at equal speed. With the simination of the anvil block a much lower total weight is obtained which in turn affects favourably the hammer bed. Actually only 1/5th of the bed normally required for anvil-block types is needed for the swaging hammer, thus resulting in a notable lessening of vibrations which are such a troublesome feature of drop hammers and damaging to building parts exposed to them.

However the major advantage of the swaging hammer compared with anvil-block types is its greater economy, as anvil-block losses are ruled out even with heaviest blows. Power economy amounts to a maximum of 40%. At medium working pressure between 6 and 8 atmospheres absolute pressure these swaging hammers are suitable both for compressedair and for steam drive:

Technical data:

Type	_	G 10	G 20	G 32	G 40
specific energy of blow fall of one tup clearance between	mkg. mm.	10,000 500	20,000 600	32,000 670	40 ,000 710
guides max. width max. depth height approx. height above floor	mm. mm. mm.	750 3,600 3,300 5,600	940 3,870 3,200 7,385	1,080 4,400 4,100 8,520	1,180 4.500 4,200 8,520
approx. hammer weight	mm.	4,000	5,550	6,300	6,300
appr	ox. t.	75	115	220	240

Export: by WMW-Export, Berlin W 8, Mohrenstrasse 61.